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<110> Antigenics, Inc.

<120> Heat Shock Protein Binding Fragments of CD91, and Uses Thereof

<130> 8449-304

<150> 60/416,821

<151> 2002-10-07

<160> 17

<170> PatentIn version 3.2

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<212> DNA

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Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
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Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
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Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
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Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
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Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
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Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
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Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
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Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
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Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
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Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
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Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
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Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
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Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
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Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
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Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
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Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
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Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
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Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
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Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
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Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
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Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
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Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
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Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
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Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
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Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
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Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
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Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
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Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685

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Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
 740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
 755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
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Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
 785 790 795 800

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Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
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Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
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Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
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Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
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Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
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Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
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Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
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Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
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Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
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Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
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Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
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Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
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Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
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Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
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Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
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Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
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Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
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Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
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Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
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Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
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Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
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Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
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Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
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Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
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Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
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Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
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Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
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Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
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Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
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Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
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Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
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Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
610 615 620

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Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Met Val Asp
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Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
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Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
675 680 685

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Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
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Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
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Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
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Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
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Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
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Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
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Val Pro Pro Gly Gly Arg Leu Val Pro Arg Gly Ser Tyr Pro Tyr Asp
 850 855 860

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Asp Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile
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Cys Pro Gln Ser Lys Ala Gln Arg Cys Pro Pro Asn Glu His Ser Cys
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Leu Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Ile
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Gln Asp Cys Met Asp Gly Ser Asp Glu Gly Ala His Cys Arg Glu Leu
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Arg Ala Asn Cys Ser Arg Met Gly Cys Gln His His Cys Val Pro Thr
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Pro Ser Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Glu Ala
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Asp Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr
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 Cys Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Thr Cys Gly Cys
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 Val Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys
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 Asn Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr
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 Pro Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn
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 Glu Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln
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 Thr Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile
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 Ile Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp
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 Lys Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys
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 Asp Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val
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 Phe Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp
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Ala Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys
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Gly Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly
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Leu Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala
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Asn Thr Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser
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Thr Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His
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Ile Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu
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Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu
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Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe
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Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met
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Gly Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met
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Asn Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe
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Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr
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Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val
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Ala Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro
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Lys Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg
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Lys Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val
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Lys Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser
675 680 685

His Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly
690 695 700

Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe
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Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile
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Val Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His
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Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg
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Leu Glu Arg Gly Val Ala Gly Ala Pro Pro Thr Val Thr Leu Leu Arg
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Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala His Glu
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Gln Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser
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Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
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Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
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Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
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Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
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Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
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Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
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Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
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Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
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Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
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Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
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Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
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Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
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Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
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Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
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Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
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Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
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Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
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Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
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Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
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Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
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Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
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Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
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Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
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Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
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Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
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Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
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Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
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Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
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Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
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Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
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Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
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Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
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Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
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Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
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Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
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Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
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Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn
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Ile Val 1205	Cys Ser Cys Pro	Leu Gly Met Glu Leu Gly 1210 1215	Pro Asp Asn
His Thr 1220	Cys Gln Ile Gln Ser	Tyr Cys Ala Lys His 1225 1230	Leu Lys Cys
Ser Gln 1235	Lys Cys Asp Gln	Asn Lys Phe Ser Val Lys 1240 1245	Cys Ser Cys
Tyr Glu 1250	Gly Trp Val Leu Glu	Pro Asp Gly Glu Ser 1255 1260	Cys Arg Ser
Leu Asp 1265	Pro Phe Lys Pro Phe	Ile Ile Phe Ser Asn 1270 1275	Arg His Glu
Ile Arg 1280	Arg Ile Asp Leu His	Lys Gly Asp Tyr Ser 1285 1290	Val Leu Val
Pro Gly 1295	Leu Arg Asn Thr Ile	Ala Leu Asp Phe His 1300 1305	Leu Ser Gln
Ser Ala 1310	Leu Tyr Trp Thr Asp	Val Val Glu Asp Lys 1315 1320	Ile Tyr Arg
Gly Lys 1325	Leu Leu Asp Asn Gly	Ala Leu Thr Ser Phe 1330 1335	Glu Val Val
Ile Gln 1340	Tyr Gly Leu Ala Thr	Pro Glu Gly Leu Ala 1345 1350	Val Asp Trp
Ile Ala 1355	Gly Asn Ile Tyr Trp	Val Glu Ser Asn Leu 1360 1365	Asp Gln Ile
Glu Val 1370	Ala Lys Leu Asp Gly	Thr Leu Arg Thr Thr 1375 1380	Leu Leu Ala
Gly Asp 1385	Ile Glu His Pro Arg	Ala Ile Ala Leu Asp 1390 1395	Pro Arg Asp
Gly Ile 1400	Leu Phe Trp Thr Asp	Trp Asp Ala Ser Leu 1405 1410	Pro Arg Ile

Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His Arg
 1415 1420 1425

Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr
 1430 1435 1440

Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile
 1445 1450 1455

Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg
 1460 1465 1470

Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
 1475 1480 1485

Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
 1490 1495 1500

Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr
 1505 1510 1515

Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln
 1520 1525 1530

Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro
 1535 1540 1545

Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys
 1550 1555 1560

Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
 1565 1570 1575

Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
 1580 1585 1590

Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser
 1595 1600 1605

Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp
 1610 1615 1620

Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala
 1625 1630 1635

Ile	Lys	Arg	Ala	Phe	Ile	Asn	Gly	Thr	Gly	Val	Glu	Thr	Val	Val
1640						1645					1650			
Ser	Ala	Asp	Leu	Pro	Asn	Ala	His	Gly	Leu	Ala	Val	Asp	Trp	Val
1655						1660					1665			
Ser	Arg	Asn	Leu	Phe	Trp	Thr	Ser	Tyr	Asp	Thr	Asn	Lys	Lys	Gln
1670						1675					1680			
Ile	Asn	Val	Ala	Arg	Leu	Asp	Gly	Ser	Phe	Lys	Asn	Ala	Val	Val
1685						1690					1695			
Gln	Gly	Leu	Glu	Gln	Pro	His	Gly	Leu	Val	Val	His	Pro	Leu	Arg
1700						1705					1710			
Gly	Lys	Leu	Tyr	Trp	Thr	Asp	Gly	Asp	Asn	Ile	Ser	Met	Ala	Asn
1715						1720					1725			
Met	Asp	Gly	Ser	Asn	Arg	Thr	Leu	Leu	Phe	Ser	Gly	Gln	Lys	Gly
1730						1735					1740			
Pro	Val	Gly	Leu	Ala	Ile	Asp	Phe	Pro	Glu	Ser	Lys	Leu	Tyr	Trp
1745						1750					1755			
Ile	Ser	Ser	Gly	Asn	His	Thr	Ile	Asn	Arg	Cys	Asn	Leu	Asp	Gly
1760						1765					1770			
Ser	Gly	Leu	Glu	Val	Ile	Asp	Ala	Met	Arg	Ser	Gln	Leu	Gly	Lys
1775						1780					1785			
Ala	Thr	Ala	Leu	Ala	Ile	Met	Gly	Asp	Lys	Leu	Trp	Trp	Ala	Asp
1790						1795					1800			
Gln	Val	Ser	Glu	Lys	Met	Gly	Thr	Cys	Ser	Lys	Ala	Asp	Gly	Ser
1805						1810					1815			
Gly	Ser	Val	Val	Leu	Arg	Asn	Ser	Thr	Thr	Leu	Val	Met	His	Met
1820						1825					1830			
Lys	Val	Tyr	Asp	Glu	Ser	Ile	Gln	Leu	Asp	His	Lys	Gly	Thr	Asn
1835						1840					1845			
Pro	Cys	Ser	Val	Asn	Asn	Gly	Asp	Cys	Ser	Gln	Leu	Cys	Leu	Pro
1850						1855					1860			

Thr	Ser	Glu	Thr	Thr	Arg	Ser	Cys	Met	Cys	Thr	Ala	Gly	Tyr	Ser
1865						1870						1875		
Leu	Arg	Ser	Gly	Gln	Gln	Ala	Cys	Glu	Gly	Val	Gly	Ser	Phe	Leu
1880						1885						1890		
Leu	Tyr	Ser	Val	His	Glu	Gly	Ile	Arg	Gly	Ile	Pro	Leu	Asp	Pro
1895						1900						1905		
Asn	Asp	Lys	Ser	Asp	Ala	Leu	Val	Pro	Val	Ser	Gly	Thr	Ser	Leu
1910						1915						1920		
Ala	Val	Gly	Ile	Asp	Phe	His	Ala	Glu	Asn	Asp	Thr	Ile	Tyr	Trp
1925						1930						1935		
Val	Asp	Met	Gly	Leu	Ser	Thr	Ile	Ser	Arg	Ala	Lys	Arg	Asp	Gln
1940						1945						1950		
Thr	Trp	Arg	Glu	Asp	Val	Val	Thr	Asn	Gly	Ile	Gly	Arg	Val	Glu
1955						1960						1965		
Gly	Ile	Ala	Val	Asp	Trp	Ile	Ala	Gly	Asn	Ile	Tyr	Trp	Thr	Asp
1970						1975						1980		
Gln	Gly	Phe	Asp	Val	Ile	Glu	Val	Ala	Arg	Leu	Asn	Gly	Ser	Phe
1985						1990						1995		
Arg	Tyr	Val	Val	Ile	Ser	Gln	Gly	Leu	Asp	Lys	Pro	Arg	Ala	Ile
2000						2005						2010		
Thr	Val	His	Pro	Glu	Lys	Gly	Tyr	Leu	Phe	Trp	Thr	Glu	Trp	Gly
2015						2020						2025		
Gln	Tyr	Pro	Arg	Ile	Glu	Arg	Ser	Arg	Leu	Asp	Gly	Thr	Glu	Arg
2030						2035						2040		
Val	Val	Leu	Val	Asn	Val	Ser	Ile	Ser	Trp	Pro	Asn	Gly	Ile	Ser
2045						2050						2055		
Val	Asp	Tyr	Gln	Asp	Gly	Lys	Leu	Tyr	Trp	Cys	Asp	Ala	Arg	Thr
2060						2065						2070		
Asp	Lys	Ile	Glu	Arg	Ile	Asp	Leu	Glu	Thr	Gly	Glu	Asn	Arg	Glu
2075						2080						2085		

Val	Val	Leu	Ser	Ser	Asn	Asn	Met	Asp	Met	Phe	Ser	Val	Ser	Val
2090						2095					2100			
Phe	Glu	Asp	Phe	Ile	Tyr	Trp	Ser	Asp	Arg	Thr	His	Ala	Asn	Gly
2105						2110					2115			
Ser	Ile	Lys	Arg	Gly	Ser	Lys	Asp	Asn	Ala	Thr	Asp	Ser	Val	Pro
2120						2125					2130			
Leu	Arg	Thr	Gly	Ile	Gly	Val	Gln	Leu	Lys	Asp	Ile	Lys	Val	Phe
2135						2140					2145			
Asn	Arg	Asp	Arg	Gln	Lys	Gly	Thr	Asn	Val	Cys	Ala	Val	Ala	Asn
2150						2155					2160			
Gly	Gly	Cys	Gln	Gln	Leu	Cys	Leu	Tyr	Arg	Gly	Arg	Gly	Gln	Arg
2165						2170					2175			
Ala	Cys	Ala	Cys	Ala	His	Gly	Met	Leu	Ala	Glu	Asp	Gly	Ala	Ser
2180						2185					2190			
Cys	Arg	Glu	Tyr	Ala	Gly	Tyr	Leu	Leu	Tyr	Ser	Glu	Arg	Thr	Ile
2195						2200					2205			
Leu	Lys	Ser	Ile	His	Leu	Ser	Asp	Glu	Arg	Asn	Leu	Asn	Ala	Pro
2210						2215					2220			
Val	Gln	Pro	Phe	Glu	Asp	Pro	Glu	His	Met	Lys	Asn	Val	Ile	Ala
2225						2230					2235			
Leu	Ala	Phe	Asp	Tyr	Arg	Ala	Gly	Thr	Ser	Pro	Gly	Thr	Pro	Asn
2240						2245					2250			
Arg	Ile	Phe	Phe	Ser	Asp	Ile	His	Phe	Gly	Asn	Ile	Gln	Gln	Ile
2255						2260					2265			
Asn	Asp	Asp	Gly	Ser	Arg	Arg	Ile	Thr	Ile	Val	Glu	Asn	Val	Gly
2270						2275					2280			
Ser	Val	Glu	Gly	Leu	Ala	Tyr	His	Arg	Gly	Trp	Asp	Thr	Leu	Tyr
2285						2290					2295			
Trp	Thr	Ser	Tyr	Thr	Thr	Ser	Thr	Ile	Thr	Arg	His	Thr	Val	Asp
2300						2305					2310			

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
 2315 2320 2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
 2330 2335 2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
 2345 2350 2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
 2360 2365 2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
 2375 2380 2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
 2390 2395 2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
 2405 2410 2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
 2420 2425 2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
 2435 2440 2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
 2450 2455 2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
 2465 2470 2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
 2480 2485 2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
 2495 2500 2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser
 2510 2515 2520

Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile
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Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
2540 2545 2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
2555 2560 2565

Thr Phe Arg Gln Cys Ser Asn Gly Arg Cys Val Ser Asn Met Leu
2570 2575 2580

Trp Cys Asn Gly Ala Asp Asp Cys Gly Asp Gly Ser Asp Glu Ile
2585 2590 2595

Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg
2600 2605 2610

Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val
2615 2620 2625

Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp
2630 2635 2640

Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln
2645 2650 2655

Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys
2660 2665 2670

Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
2675 2680 2685

Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
2690 2695 2700

Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu
2705 2710 2715

Asp Asp Cys Glu His Gly Glu Asp Glu Thr His Cys Asn Lys Phe
2720 2725 2730

Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser
2735 2740 2745

Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser
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Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser
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Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu
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Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly Ala Asp Glu Ser Ile
 2795 2800 2805

Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe
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Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe Val Cys Asp
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His Asp Arg Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys
 2840 2845 2850

Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg Cys Ala Asn Gly
 2855 2860 2865

Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp
 2870 2875 2880

Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His Cys Thr
 2885 2890 2895

Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys Ser
 2900 2905 2910

Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
 2915 2920 2925

Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
 2930 2935 2940

Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
 2945 2950 2955

Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
 2960 2965 2970

Lys Asp Asp Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr
 2975 2980 2985

Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
 2990 2995 3000

Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
 3005 3010 3015

His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
 3020 3025 3030

Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
 3035 3040 3045

Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Asp
 3050 3055 3060

Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp Val Thr Thr
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Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val
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Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala
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Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg
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Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val
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Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val Asp
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Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser
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Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Ser Arg Ser Val Ile
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Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr
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Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile
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Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser
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Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr
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Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His
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Lys Thr Thr Gly Thr Asn Lys Thr Leu Leu Ile Ser Thr Leu His
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Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp
 3275 3280 3285

Val Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn
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Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro
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Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val Ser Asn
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Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro
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Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser
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Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln
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Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys
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Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys
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Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
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Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn
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Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys
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 Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro
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 Arg Val Trp Val Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser
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 Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu
 3485 3490 3495
 Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys
 3500 3505 3510
 Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys
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 Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys
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 Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp
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 Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys Ile
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 Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys Ala Asp Gly
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 Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp Gln Phe
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 Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys Asp
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 Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly
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 Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn
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Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp
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Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe
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Val Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val
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Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Thr Asp Asn Cys Gly
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Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala His Thr
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Thr His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg
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Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly
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Asp Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr
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Ser Cys Ala Thr Asn Ala Ser Ile Cys Gly Asp Glu Ala Arg Cys
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Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe
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His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys
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Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly
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Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn
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Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala
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Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
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Ala Tyr	Glu Gln	Ala Phe	Gln Gly	Asp Glu	Ser Val	Arg Ile	Asp
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Ala Met	Asp Val	His Val	Lys Ala	Gly Arg	Val Tyr	Trp Thr	Asn
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Trp His	Thr Gly	Thr Ile	Ser Tyr	Arg Ser	Leu Pro	Pro Ala	Ala
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Pro Pro	Thr Thr	Ser Asn	Arg His	Arg Arg	Gln Ile	Asp Arg	Gly
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Val Thr	His Leu	Asn Ile	Ser Gly	Leu Lys	Met Pro	Arg Gly	Ile
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Ala Ile	Asp Trp	Val Ala	Gly Asn	Val Tyr	Trp Thr	Asp Ser	Gly
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Arg Asp	Val Ile	Glu Val	Ala Gln	Met Lys	Gly Glu	Asn Arg	Lys
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Thr Leu	Ile Ser	Gly Met	Ile Asp	Glu Pro	His Ala	Ile Val	Val
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Asp Pro	Leu Arg	Gly Thr	Met Tyr	Trp Ser	Asp Trp	Gly Asn	His
4010			4015			4020	
Pro Lys	Ile Glu	Thr Ala	Ala Met	Asp Gly	Thr Leu	Arg Glu	Thr
4025			4030			4035	
Leu Val	Gln Asp	Asn Ile	Gln Trp	Pro Thr	Gly Leu	Ala Val	Asp
4040			4045			4050	
Tyr His	Asn Glu	Arg Leu	Tyr Trp	Ala Asp	Ala Lys	Leu Ser	Val
4055			4060			4065	
Ile Gly	Ser Ile	Arg Leu	Asn Gly	Thr Asp	Pro Ile	Val Ala	Ala
4070			4075			4080	
Asp Ser	Lys Arg	Gly Leu	Ser His	Pro Phe	Ser Ile	Asp Val	Phe
4085			4090			4095	
Glu Asp	Tyr Ile	Tyr Gly	Val Thr	Tyr Ile	Asn Asn	Arg Val	Phe
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Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
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Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
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Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp
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Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn
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Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
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Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln
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Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro
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Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu
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Asp Gln Cys Trp Glu His Cys Arg Asn Gly Gly Thr Cys Ala Ala
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Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr
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Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
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Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
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Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
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Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg
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Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
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Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
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Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn
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Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln
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Cys Pro Pro His Met Thr Gly Pro Arg Cys Glu Glu His Val Phe
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Ser Gln Gln Gln Pro Gly His Ile Ala Ser Ile Leu Ile Pro Leu
 4415 4420 4425

Leu Leu Leu Leu Leu Leu Val Leu Val Ala Gly Val Val Phe Trp
 4430 4435 4440

Tyr Lys Arg Arg Val Gln Gly Ala Lys Gly Phe Gln His Gln Arg
 4445 4450 4455

Met Thr Asn Gly Ala Met Asn Val Glu Ile Gly Asn Pro Thr Tyr
 4460 4465 4470

Lys Met Tyr Glu Gly Gly Glu Pro Asp Asp Val Gly Gly Leu Leu
 4475 4480 4485

Asp Ala Asp Phe Ala Leu Asp Pro Asp Lys Pro Thr Asn Phe Thr
 4490 4495 4500

Asn Pro Val Tyr Ala Thr Leu Tyr Met Gly Gly His Gly Ser Arg
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Gly Pro Glu Asp Glu Ile Gly Asp Pro Leu Ala
 4535 4540

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 <211> 2565
 <212> PRT
 <213> H. sapiens

<400> 6

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Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
 20 25 30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
 340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
 355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
 515 520 525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
 530 535 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
 545 550 555 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
 565 570 575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
 610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
 625 630 635 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
 645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
 690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
 705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
 725 730 735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
 740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
 755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
 770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
 785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
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Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
 820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
 835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
 850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
 865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
 885 890 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
 900 905 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
 915 920 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
 930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
 945 950 955 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
 965 970 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
 980 985 990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 995 1000 1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
 1010 1015 1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
 1025 1030 1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
 1040 1045 1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
 1055 1060 1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
 1070 1075 1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
 1085 1090 1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
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Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
 1115 1120 1125

Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
 1130 1135 1140

Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
 1145 1150 1155

Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
 1160 1165 1170

Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn
 1175 1180 1185

Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly
 1190 1195 1200

Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn
 1205 1210 1215

His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
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Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
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Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
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Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
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Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
 1280 1285 1290

Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
 1295 1300 1305

Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
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Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
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Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
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Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile
 1355 1360 1365

Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala
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Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp
 1385 1390 1395

Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile
 1400 1405 1410

Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His Arg
 1415 1420 1425

 Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr
 1430 1435 1440

 Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile
 1445 1450 1455

 Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg
 1460 1465 1470

 Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
 1475 1480 1485

 Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
 1490 1495 1500

 Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr
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 Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln
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 Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro
 1535 1540 1545

 Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys
 1550 1555 1560

 Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
 1565 1570 1575

 Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
 1580 1585 1590

 Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser
 1595 1600 1605

 Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp
 1610 1615 1620

 Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala
 1625 1630 1635

Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val
 1640 1645 1650

Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp Val
 1655 1660 1665

Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln
 1670 1675 1680

Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val
 1685 1690 1695

Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg
 1700 1705 1710

Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
 1715 1720 1725

Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly
 1730 1735 1740

Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp
 1745 1750 1755

Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly
 1760 1765 1770

Ser Gly Leu Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys
 1775 1780 1785

Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp
 1790 1795 1800

Gln Val Ser Glu Lys Met Gly Thr Cys Ser Lys Ala Asp Gly Ser
 1805 1810 1815

Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met
 1820 1825 1830

Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp His Lys Gly Thr Asn
 1835 1840 1845

Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro
 1850 1855 1860

Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser
 1865 1870 1875

Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu
 1880 1885 1890

Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro
 1895 1900 1905

Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu
 1910 1915 1920

Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp
 1925 1930 1935

Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln
 1940 1945 1950

Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
 1955 1960 1965

Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
 1970 1975 1980

Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe
 1985 1990 1995

Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile
 2000 2005 2010

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
 2015 2020 2025

Gln Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg
 2030 2035 2040

Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
 2045 2050 2055

Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
 2060 2065 2070

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
 2075 2080 2085

Val	Val	Leu	Ser	Ser	Asn	Asn	Met	Asp	Met	Phe	Ser	Val	Ser	Val
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Phe	Glu	Asp	Phe	Ile	Tyr	Trp	Ser	Asp	Arg	Thr	His	Ala	Asn	Gly
2105						2110					2115			
Ser	Ile	Lys	Arg	Gly	Ser	Lys	Asp	Asn	Ala	Thr	Asp	Ser	Val	Pro
2120						2125					2130			
Leu	Arg	Thr	Gly	Ile	Gly	Val	Gln	Leu	Lys	Asp	Ile	Lys	Val	Phe
2135						2140					2145			
Asn	Arg	Asp	Arg	Gln	Lys	Gly	Thr	Asn	Val	Cys	Ala	Val	Ala	Asn
2150						2155					2160			
Gly	Gly	Cys	Gln	Gln	Leu	Cys	Leu	Tyr	Arg	Gly	Arg	Gly	Gln	Arg
2165						2170					2175			
Ala	Cys	Ala	Cys	Ala	His	Gly	Met	Leu	Ala	Glu	Asp	Gly	Ala	Ser
2180						2185					2190			
Cys	Arg	Glu	Tyr	Ala	Gly	Tyr	Leu	Leu	Tyr	Ser	Glu	Arg	Thr	Ile
2195						2200					2205			
Leu	Lys	Ser	Ile	His	Leu	Ser	Asp	Glu	Arg	Asn	Leu	Asn	Ala	Pro
2210						2215					2220			
Val	Gln	Pro	Phe	Glu	Asp	Pro	Glu	His	Met	Lys	Asn	Val	Ile	Ala
2225						2230					2235			
Leu	Ala	Phe	Asp	Tyr	Arg	Ala	Gly	Thr	Ser	Pro	Gly	Thr	Pro	Asn
2240						2245					2250			
Arg	Ile	Phe	Phe	Ser	Asp	Ile	His	Phe	Gly	Asn	Ile	Gln	Gln	Ile
2255						2260					2265			
Asn	Asp	Asp	Gly	Ser	Arg	Arg	Ile	Thr	Ile	Val	Glu	Asn	Val	Gly
2270						2275					2280			
Ser	Val	Glu	Gly	Leu	Ala	Tyr	His	Arg	Gly	Trp	Asp	Thr	Leu	Tyr
2285						2290					2295			
Trp	Thr	Ser	Tyr	Thr	Thr	Ser	Thr	Ile	Thr	Arg	His	Thr	Val	Asp
2300						2305					2310			

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
 2315 2320 2325

 Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
 2330 2335 2340

 Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
 2345 2350 2355

 Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
 2360 2365 2370

 Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
 2375 2380 2385

 Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
 2390 2395 2400

 Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
 2405 2410 2415

 Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
 2420 2425 2430

 Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
 2435 2440 2445

 Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
 2450 2455 2460

 Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
 2465 2470 2475

 Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
 2480 2485 2490

 Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
 2495 2500 2505

 Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Gly Gly Arg
 2510 2515 2520

 Leu Val Pro Arg Gly Ser Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
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Ile Glu Gly His Val Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys
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Ile Glu Trp His Glu Gly His His His His His His
 2555 2560 2565

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 <211> 2520
 <212> PRT
 <213> H. sapiens

<400> 7

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Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
 20 25 30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
 340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
 355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
 515 520 525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
 530 535 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
 545 550 555 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
 565 570 575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
 610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
 625 630 635 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
 645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
725 730 735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
805 810 815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
885 890 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
900 905 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
 915 920 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
 930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
 945 950 955 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
 965 970 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
 980 985 990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 995 1000 1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
 1010 1015 1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
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Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
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Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
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Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
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Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
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Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
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Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
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Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
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Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
1145 1150 1155

Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
1160 1165 1170

Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn
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Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly
1190 1195 1200

Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn
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His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
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Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
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Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
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Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
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Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
1280 1285 1290

Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
1295 1300 1305

Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
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Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
1325 1330 1335

Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
1340 1345 1350

Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile
1355 1360 1365

Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala
 1370 1375 1380

Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp
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Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile
 1400 1405 1410

Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His Arg
 1415 1420 1425

Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr
 1430 1435 1440

Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile
 1445 1450 1455

Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg
 1460 1465 1470

Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
 1475 1480 1485

Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
 1490 1495 1500

Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr
 1505 1510 1515

Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln
 1520 1525 1530

Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro
 1535 1540 1545

Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys
 1550 1555 1560

Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
 1565 1570 1575

Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
 1580 1585 1590

Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser
 1595 1600 1605

Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp
 1610 1615 1620

Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala
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Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val
 1640 1645 1650

Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp Val
 1655 1660 1665

Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln
 1670 1675 1680

Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val
 1685 1690 1695

Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg
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Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
 1715 1720 1725

Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly
 1730 1735 1740

Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp
 1745 1750 1755

Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly
 1760 1765 1770

Ser Gly Leu Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys
 1775 1780 1785

Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp
 1790 1795 1800

Gln Val Ser Glu Lys Met Gly Thr Cys Ser Lys Ala Asp Gly Ser
 1805 1810 1815

Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met
 1820 1825 1830

Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp His Lys Gly Thr Asn
 1835 1840 1845

Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro
 1850 1855 1860

Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser
 1865 1870 1875

Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu
 1880 1885 1890

Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro
 1895 1900 1905

Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu
 1910 1915 1920

Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp
 1925 1930 1935

Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln
 1940 1945 1950

Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
 1955 1960 1965

Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
 1970 1975 1980

Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe
 1985 1990 1995

Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile
 2000 2005 2010

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
 2015 2020 2025

Gln Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg
 2030 2035 2040

Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
2045 2050 2055

Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
2060 2065 2070

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
2075 2080 2085

Val Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val
2090 2095 2100

Phe Glu Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly
2105 2110 2115

Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala Thr Asp Ser Val Pro
2120 2125 2130

Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe
2135 2140 2145

Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala Val Ala Asn
2150 2155 2160

Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly Gln Arg
2165 2170 2175

Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala Ser
2180 2185 2190

Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile
2195 2200 2205

Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
2210 2215 2220

Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala
2225 2230 2235

Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn
2240 2245 2250

Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile
2255 2260 2265

Asn Asp	Asp Gly Ser Arg Arg	Ile Thr Ile Val Glu	Asn Val Gly
2270	2275	2280	
Ser Val	Glu Gly Leu Ala Tyr His Arg Gly Trp Asp	Thr Leu Tyr	
2285	2290	2295	
Trp Thr	Ser Tyr Thr Thr Ser Thr Ile Thr Arg His	Thr Val Asp	
2300	2305	2310	
Gln Thr	Arg Pro Gly Ala Phe Glu Arg Glu Thr Val	Ile Thr Met	
2315	2320	2325	
Ser Gly	Asp Asp His Pro Arg Ala Phe Val Leu Asp	Glu Cys Gln	
2330	2335	2340	
Asn Leu	Met Phe Trp Thr Asn Trp Asn Glu Gln His	Pro Ser Ile	
2345	2350	2355	
Met Arg	Ala Ala Leu Ser Gly Ala Asn Val Leu Thr	Leu Ile Glu	
2360	2365	2370	
Lys Asp	Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp	His Arg Ala	
2375	2380	2385	
Glu Lys	Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys	Ile Glu Arg	
2390	2395	2400	
Cys Glu	Tyr Asp Gly Ser His Arg Tyr Val Ile Leu	Lys Ser Glu	
2405	2410	2415	
Pro Val	His Pro Phe Gly Leu Ala Val Tyr Gly Glu	His Ile Phe	
2420	2425	2430	
Trp Thr	Asp Trp Val Arg Arg Ala Val Gln Arg Ala	Asn Lys His	
2435	2440	2445	
Val Gly	Ser Asn Met Lys Leu Leu Arg Val Asp Ile	Pro Gln Gln	
2450	2455	2460	
Pro Met	Gly Ile Ile Ala Val Ala Asn Asp Thr Asn	Ser Cys Glu	
2465	2470	2475	
Leu Ser	Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln	Asp Leu Cys	
2480	2485	2490	

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
 2495 2500 2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val
 2510 2515 2520

<210> 8
 <211> 4464
 <212> PRT
 <213> H. sapiens

<400> 8

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
 1 5 10 15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
 20 25 30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
 340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
 355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
 515 520 525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
 530 535 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
 545 550 555 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
 565 570 575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
 610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
 625 630 635 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
 645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
 690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
 705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
 725 730 735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
 740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
 755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
 770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
 785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
 805 810 815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
 820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
 835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
 850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
 865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
 885 890 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
 900 905 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
 915 920 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
 930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
 945 950 955 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
 965 970 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
 980 985 990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 995 1000 1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
 1010 1015 1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
 1025 1030 1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
 1040 1045 1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
 1055 1060 1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
 1070 1075 1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
 1085 1090 1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
 1100 1105 1110

Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
 1115 1120 1125

Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
 1130 1135 1140

Ala Cys	Arg Pro Pro Ser	His	Pro Cys Ala Asn	Asn	Thr Ser Val
1145		1150		1155	
Cys Leu	Pro Pro Asp Lys	Leu	Cys Asp Gly Asn	Asp	Asp Cys Gly
1160		1165		1170	
Asp Gly	Ser Asp Glu Gly	Glu	Leu Cys Asp Gln	Cys	Ser Leu Asn
1175		1180		1185	
Asn Gly	Gly Cys Ser His	Asn	Cys Ser Val Ala	Pro	Gly Glu Gly
1190		1195		1200	
Ile Val	Cys Ser Cys Pro	Leu	Gly Met Glu Leu	Gly	Pro Asp Asn
1205		1210		1215	
His Thr	Cys Gln Ile Gln	Ser	Tyr Cys Ala Lys	His	Leu Lys Cys
1220		1225		1230	
Ser Gln	Lys Cys Asp Gln	Asn	Lys Phe Ser Val	Lys	Cys Ser Cys
1235		1240		1245	
Tyr Glu	Gly Trp Val Leu	Glu	Pro Asp Gly Glu	Ser	Cys Arg Ser
1250		1255		1260	
Leu Asp	Pro Phe Lys Pro	Phe	Ile Ile Phe Ser	Asn	Arg His Glu
1265		1270		1275	
Ile Arg	Arg Ile Asp Leu	His	Lys Gly Asp Tyr	Ser	Val Leu Val
1280		1285		1290	
Pro Gly	Leu Arg Asn Thr	Ile	Ala Leu Asp Phe	His	Leu Ser Gln
1295		1300		1305	
Ser Ala	Leu Tyr Trp Thr	Asp	Val Val Glu Asp	Lys	Ile Tyr Arg
1310		1315		1320	
Gly Lys	Leu Leu Asp Asn	Gly	Ala Leu Thr Ser	Phe	Glu Val Val
1325		1330		1335	
Ile Gln	Tyr Gly Leu Ala	Thr	Pro Glu Gly Leu	Ala	Val Asp Trp
1340		1345		1350	
Ile Ala	Gly Asn Ile Tyr	Trp	Val Glu Ser Asn	Leu	Asp Gln Ile
1355		1360		1365	

Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala
 1370 1375 1380

Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp
 1385 1390 1395

Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile
 1400 1405 1410

Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His Arg
 1415 1420 1425

Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr
 1430 1435 1440

Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile
 1445 1450 1455

Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg
 1460 1465 1470

Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
 1475 1480 1485

Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
 1490 1495 1500

Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr
 1505 1510 1515

Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln
 1520 1525 1530

Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro
 1535 1540 1545

Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys
 1550 1555 1560

Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
 1565 1570 1575

Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
 1580 1585 1590

Arg	Gly	Val	Asp	Leu	Asp	Ala	Pro	Tyr	Tyr	Asn	Tyr	Ile	Ile	Ser
1595						1600					1605			
Phe	Thr	Val	Pro	Asp	Ile	Asp	Asn	Val	Thr	Val	Leu	Asp	Tyr	Asp
1610						1615					1620			
Ala	Arg	Glu	Gln	Arg	Val	Tyr	Trp	Ser	Asp	Val	Arg	Thr	Gln	Ala
1625						1630					1635			
Ile	Lys	Arg	Ala	Phe	Ile	Asn	Gly	Thr	Gly	Val	Glu	Thr	Val	Val
1640						1645					1650			
Ser	Ala	Asp	Leu	Pro	Asn	Ala	His	Gly	Leu	Ala	Val	Asp	Trp	Val
1655						1660					1665			
Ser	Arg	Asn	Leu	Phe	Trp	Thr	Ser	Tyr	Asp	Thr	Asn	Lys	Lys	Gln
1670						1675					1680			
Ile	Asn	Val	Ala	Arg	Leu	Asp	Gly	Ser	Phe	Lys	Asn	Ala	Val	Val
1685						1690					1695			
Gln	Gly	Leu	Glu	Gln	Pro	His	Gly	Leu	Val	Val	His	Pro	Leu	Arg
1700						1705					1710			
Gly	Lys	Leu	Tyr	Trp	Thr	Asp	Gly	Asp	Asn	Ile	Ser	Met	Ala	Asn
1715						1720					1725			
Met	Asp	Gly	Ser	Asn	Arg	Thr	Leu	Leu	Phe	Ser	Gly	Gln	Lys	Gly
1730						1735					1740			
Pro	Val	Gly	Leu	Ala	Ile	Asp	Phe	Pro	Glu	Ser	Lys	Leu	Tyr	Trp
1745						1750					1755			
Ile	Ser	Ser	Gly	Asn	His	Thr	Ile	Asn	Arg	Cys	Asn	Leu	Asp	Gly
1760						1765					1770			
Ser	Gly	Leu	Glu	Val	Ile	Asp	Ala	Met	Arg	Ser	Gln	Leu	Gly	Lys
1775						1780					1785			
Ala	Thr	Ala	Leu	Ala	Ile	Met	Gly	Asp	Lys	Leu	Trp	Trp	Ala	Asp
1790						1795					1800			
Gln	Val	Ser	Glu	Lys	Met	Gly	Thr	Cys	Ser	Lys	Ala	Asp	Gly	Ser
1805						1810					1815			

Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met
 1820 1825 1830

Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp His Lys Gly Thr Asn
 1835 1840 1845

Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro
 1850 1855 1860

Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser
 1865 1870 1875

Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu
 1880 1885 1890

Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro
 1895 1900 1905

Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu
 1910 1915 1920

Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp
 1925 1930 1935

Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln
 1940 1945 1950

Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
 1955 1960 1965

Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
 1970 1975 1980

Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe
 1985 1990 1995

Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile
 2000 2005 2010

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
 2015 2020 2025

Gln Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg
 2030 2035 2040

Val	Val	Leu	Val	Asn	Val	Ser	Ile	Ser	Trp	Pro	Asn	Gly	Ile	Ser
2045						2050					2055			
Val	Asp	Tyr	Gln	Asp	Gly	Lys	Leu	Tyr	Trp	Cys	Asp	Ala	Arg	Thr
2060						2065					2070			
Asp	Lys	Ile	Glu	Arg	Ile	Asp	Leu	Glu	Thr	Gly	Glu	Asn	Arg	Glu
2075						2080					2085			
Val	Val	Leu	Ser	Ser	Asn	Asn	Met	Asp	Met	Phe	Ser	Val	Ser	Val
2090						2095					2100			
Phe	Glu	Asp	Phe	Ile	Tyr	Trp	Ser	Asp	Arg	Thr	His	Ala	Asn	Gly
2105						2110					2115			
Ser	Ile	Lys	Arg	Gly	Ser	Lys	Asp	Asn	Ala	Thr	Asp	Ser	Val	Pro
2120						2125					2130			
Leu	Arg	Thr	Gly	Ile	Gly	Val	Gln	Leu	Lys	Asp	Ile	Lys	Val	Phe
2135						2140					2145			
Asn	Arg	Asp	Arg	Gln	Lys	Gly	Thr	Asn	Val	Cys	Ala	Val	Ala	Asn
2150						2155					2160			
Gly	Gly	Cys	Gln	Gln	Leu	Cys	Leu	Tyr	Arg	Gly	Arg	Gly	Gln	Arg
2165						2170					2175			
Ala	Cys	Ala	Cys	Ala	His	Gly	Met	Leu	Ala	Glu	Asp	Gly	Ala	Ser
2180						2185					2190			
Cys	Arg	Glu	Tyr	Ala	Gly	Tyr	Leu	Leu	Tyr	Ser	Glu	Arg	Thr	Ile
2195						2200					2205			
Leu	Lys	Ser	Ile	His	Leu	Ser	Asp	Glu	Arg	Asn	Leu	Asn	Ala	Pro
2210						2215					2220			
Val	Gln	Pro	Phe	Glu	Asp	Pro	Glu	His	Met	Lys	Asn	Val	Ile	Ala
2225						2230					2235			
Leu	Ala	Phe	Asp	Tyr	Arg	Ala	Gly	Thr	Ser	Pro	Gly	Thr	Pro	Asn
2240						2245					2250			
Arg	Ile	Phe	Phe	Ser	Asp	Ile	His	Phe	Gly	Asn	Ile	Gln	Gln	Ile
2255						2260					2265			

Asn Asp Asp Gly Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly
 2270 2275 2280

Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr
 2285 2290 2295

Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp
 2300 2305 2310

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
 2315 2320 2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
 2330 2335 2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
 2345 2350 2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
 2360 2365 2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
 2375 2380 2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
 2390 2395 2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
 2405 2410 2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
 2420 2425 2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
 2435 2440 2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
 2450 2455 2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
 2465 2470 2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
 2480 2485 2490

Leu	Leu	Thr	His	Gln	Gly	His	Val	Asn	Cys	Ser	Cys	Arg	Gly	Gly
2495						2500					2505			
Arg	Ile	Leu	Gln	Asp	Asp	Leu	Thr	Cys	Arg	Ala	Val	Asn	Ser	Ser
2510						2515					2520			
Cys	Arg	Ala	Gln	Asp	Glu	Phe	Glu	Cys	Ala	Asn	Gly	Glu	Cys	Ile
2525						2530					2535			
Asn	Phe	Ser	Leu	Thr	Cys	Asp	Gly	Val	Pro	His	Cys	Lys	Asp	Lys
2540						2545					2550			
Ser	Asp	Glu	Lys	Pro	Ser	Tyr	Cys	Asn	Ser	Arg	Arg	Cys	Lys	Lys
2555						2560					2565			
Thr	Phe	Arg	Gln	Cys	Ser	Asn	Gly	Arg	Cys	Val	Ser	Asn	Met	Leu
2570						2575					2580			
Trp	Cys	Asn	Gly	Ala	Asp	Asp	Cys	Gly	Asp	Gly	Ser	Asp	Glu	Ile
2585						2590					2595			
Pro	Cys	Asn	Lys	Thr	Ala	Cys	Gly	Val	Gly	Glu	Phe	Arg	Cys	Arg
2600						2605					2610			
Asp	Gly	Thr	Cys	Ile	Gly	Asn	Ser	Ser	Arg	Cys	Asn	Gln	Phe	Val
2615						2620					2625			
Asp	Cys	Glu	Asp	Ala	Ser	Asp	Glu	Met	Asn	Cys	Ser	Ala	Thr	Asp
2630						2635					2640			
Cys	Ser	Ser	Tyr	Phe	Arg	Leu	Gly	Val	Lys	Gly	Val	Leu	Phe	Gln
2645						2650					2655			
Pro	Cys	Glu	Arg	Thr	Ser	Leu	Cys	Tyr	Ala	Pro	Ser	Trp	Val	Cys
2660						2665					2670			
Asp	Gly	Ala	Asn	Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Arg	Asp	Cys
2675						2680					2685			
Pro	Gly	Val	Lys	Arg	Pro	Arg	Cys	Pro	Leu	Asn	Tyr	Phe	Ala	Cys
2690						2695					2700			
Pro	Ser	Gly	Arg	Cys	Ile	Pro	Met	Ser	Trp	Thr	Cys	Asp	Lys	Glu
2705						2710					2715			

Asp Asp Cys Glu His Gly Glu Asp Glu Thr His Cys Asn Lys Phe
 2720 2725 2730
 Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser
 2735 2740 2745
 Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser
 2750 2755 2760
 Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser
 2765 2770 2775
 Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu
 2780 2785 2790
 Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly Ala Asp Glu Ser Ile
 2795 2800 2805
 Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe
 2810 2815 2820
 Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe Val Cys Asp
 2825 2830 2835
 His Asp Arg Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys
 2840 2845 2850
 Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg Cys Ala Asn Gly
 2855 2860 2865
 Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp
 2870 2875 2880
 Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His Cys Thr
 2885 2890 2895
 Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys Ser
 2900 2905 2910
 Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
 2915 2920 2925
 Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
 2930 2935 2940

Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
 2945 2950 2955
 Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
 2960 2965 2970
 Lys Asp Asp Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr
 2975 2980 2985
 Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
 2990 2995 3000
 Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
 3005 3010 3015
 His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
 3020 3025 3030
 Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
 3035 3040 3045
 Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Asp
 3050 3055 3060
 Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp Val Thr Thr
 3065 3070 3075
 Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val
 3080 3085 3090
 Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala
 3095 3100 3105
 Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg
 3110 3115 3120
 Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val
 3125 3130 3135
 Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val Asp
 3140 3145 3150
 Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser
 3155 3160 3165

Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Ser Arg Ser Val Ile
 3170 3175 3180

Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr
 3185 3190 3195

Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile
 3200 3205 3210

Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser
 3215 3220 3225

Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr
 3230 3235 3240

Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His
 3245 3250 3255

Lys Thr Thr Gly Thr Asn Lys Thr Leu Leu Ile Ser Thr Leu His
 3260 3265 3270

Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp
 3275 3280 3285

Val Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn
 3290 3295 3300

Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro
 3305 3310 3315

Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val Ser Asn
 3320 3325 3330

Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro
 3335 3340 3345

Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser
 3350 3355 3360

Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln
 3365 3370 3375

Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys
 3380 3385 3390

Asp Gly	Asp Asn Asp Cys	Gln	Asp Asn Ser Asp	Glu	Ala Asn Cys
3395		3400		3405	
Asp Ile	His Val Cys Leu	Pro	Ser Gln Phe Lys	Cys	Thr Asn Thr
3410		3415		3420	
Asn Arg	Cys Ile Pro Gly	Ile	Phe Arg Cys Asn	Gly	Gln Asp Asn
3425		3430		3435	
Cys Gly	Asp Gly Glu Asp	Glu	Arg Asp Cys Pro	Glu	Val Thr Cys
3440		3445		3450	
Ala Pro	Asn Gln Phe Gln	Cys	Ser Ile Thr Lys	Arg	Cys Ile Pro
3455		3460		3465	
Arg Val	Trp Val Cys Asp	Arg	Asp Asn Asp Cys	Val	Asp Gly Ser
3470		3475		3480	
Asp Glu	Pro Ala Asn Cys	Thr	Gln Met Thr Cys	Gly	Val Asp Glu
3485		3490		3495	
Phe Arg	Cys Lys Asp Ser	Gly	Arg Cys Ile Pro	Ala	Arg Trp Lys
3500		3505		3510	
Cys Asp	Gly Glu Asp Asp	Cys	Gly Asp Gly Ser	Asp	Glu Pro Lys
3515		3520		3525	
Glu Glu	Cys Asp Glu Arg	Thr	Cys Glu Pro Tyr	Gln	Phe Arg Cys
3530		3535		3540	
Lys Asn	Asn Arg Cys Val	Pro	Gly Arg Trp Gln	Cys	Asp Tyr Asp
3545		3550		3555	
Asn Asp	Cys Gly Asp Asn	Ser	Asp Glu Glu Ser	Cys	Thr Pro Arg
3560		3565		3570	
Pro Cys	Ser Glu Ser Glu	Phe	Ser Cys Ala Asn	Gly	Arg Cys Ile
3575		3580		3585	
Ala Gly	Arg Trp Lys Cys	Asp	Gly Asp His Asp	Cys	Ala Asp Gly
3590		3595		3600	
Ser Asp	Glu Lys Asp Cys	Thr	Pro Arg Cys Asp	Met	Asp Gln Phe
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Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys Asp
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 Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly
 3635 3640 3645
 Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn
 3650 3655 3660
 Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp
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 Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe
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 Val Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val
 3695 3700 3705
 Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Thr Asp Asn Cys Gly
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 Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala His Thr
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 Thr His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg
 3740 3745 3750
 Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly
 3755 3760 3765
 Asp Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr
 3770 3775 3780
 Ser Cys Ala Thr Asn Ala Ser Ile Cys Gly Asp Glu Ala Arg Cys
 3785 3790 3795
 Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe
 3800 3805 3810
 His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys
 3815 3820 3825
 Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly
 3830 3835 3840

Gly His	Leu Cys Ser Cys	Ala	Arg Asn Phe Met	Lys	Thr His Asn
3845		3850		3855	
Thr Cys	Lys Ala Glu Gly	Ser	Glu Tyr Gln Val	Leu	Tyr Ile Ala
3860		3865		3870	
Asp Asp	Asn Glu Ile Arg	Ser	Leu Phe Pro Gly	His	Pro His Ser
3875		3880		3885	
Ala Tyr	Glu Gln Ala Phe	Gln	Gly Asp Glu Ser	Val	Arg Ile Asp
3890		3895		3900	
Ala Met	Asp Val His Val	Lys	Ala Gly Arg Val	Tyr	Trp Thr Asn
3905		3910		3915	
Trp His	Thr Gly Thr Ile	Ser	Tyr Arg Ser Leu	Pro	Pro Ala Ala
3920		3925		3930	
Pro Pro	Thr Thr Ser Asn	Arg	His Arg Arg Gln	Ile	Asp Arg Gly
3935		3940		3945	
Val Thr	His Leu Asn Ile	Ser	Gly Leu Lys Met	Pro	Arg Gly Ile
3950		3955		3960	
Ala Ile	Asp Trp Val Ala	Gly	Asn Val Tyr Trp	Thr	Asp Ser Gly
3965		3970		3975	
Arg Asp	Val Ile Glu Val	Ala	Gln Met Lys Gly	Glu	Asn Arg Lys
3980		3985		3990	
Thr Leu	Ile Ser Gly Met	Ile	Asp Glu Pro His	Ala	Ile Val Val
3995		4000		4005	
Asp Pro	Leu Arg Gly Thr	Met	Tyr Trp Ser Asp	Trp	Gly Asn His
4010		4015		4020	
Pro Lys	Ile Glu Thr Ala	Ala	Met Asp Gly Thr	Leu	Arg Glu Thr
4025		4030		4035	
Leu Val	Gln Asp Asn Ile	Gln	Trp Pro Thr Gly	Leu	Ala Val Asp
4040		4045		4050	
Tyr His	Asn Glu Arg Leu	Tyr	Trp Ala Asp Ala	Lys	Leu Ser Val
4055		4060		4065	

Ile Gly	Ser Ile Arg Leu Asn	Gly Thr Asp Pro Ile	Val Ala Ala
4070	4075	4080	
Asp Ser	Lys Arg Gly Leu Ser	His Pro Phe Ser Ile	Asp Val Phe
4085	4090	4095	
Glu Asp	Tyr Ile Tyr Gly Val	Thr Tyr Ile Asn Asn	Arg Val Phe
4100	4105	4110	
Lys Ile	His Lys Phe Gly His	Ser Pro Leu Val Asn	Leu Thr Gly
4115	4120	4125	
Gly Leu	Ser His Ala Ser Asp	Val Val Leu Tyr His	Gln His Lys
4130	4135	4140	
Gln Pro	Glu Val Thr Asn Pro	Cys Asp Arg Lys Lys	Cys Glu Trp
4145	4150	4155	
Leu Cys	Leu Leu Ser Pro Ser	Gly Pro Val Cys Thr	Cys Pro Asn
4160	4165	4170	
Gly Lys	Arg Leu Asp Asn Gly	Thr Cys Val Pro Val	Pro Ser Pro
4175	4180	4185	
Thr Pro	Pro Pro Asp Ala Pro	Arg Pro Gly Thr Cys	Asn Leu Gln
4190	4195	4200	
Cys Phe	Asn Gly Gly Ser Cys	Phe Leu Asn Ala Arg	Arg Gln Pro
4205	4210	4215	
Lys Cys	Arg Cys Gln Pro Arg	Tyr Thr Gly Asp Lys	Cys Glu Leu
4220	4225	4230	
Asp Gln	Cys Trp Glu His Cys	Arg Asn Gly Gly Thr	Cys Ala Ala
4235	4240	4245	
Ser Pro	Ser Gly Met Pro Thr	Cys Arg Cys Pro Thr	Gly Phe Thr
4250	4255	4260	
Gly Pro	Lys Cys Thr Gln Gln	Val Cys Ala Gly Tyr	Cys Ala Asn
4265	4270	4275	
Asn Ser	Thr Cys Thr Val Asn	Gln Gly Asn Gln Pro	Gln Cys Arg
4280	4285	4290	

Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys
 4295 4300 4305

Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
 4310 4315 4320

Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg
 4325 4330 4335

Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
 4340 4345 4350

Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
 4355 4360 4365

Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn
 4370 4375 4380

Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln
 4385 4390 4395

Cys Pro Pro His Met Thr Gly Pro Arg Cys Glu Glu His Val Phe
 4400 4405 4410

Ser Gln Gln Gln Pro Gly Gly Gly Arg Leu Val Pro Arg Gly Ser
 4415 4420 4425

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Ile Glu Gly His Val Gly
 4430 4435 4440

Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu Gly
 4445 4450 4455

His His His His His His
 4460

<210> 9
 <211> 4419
 <212> PRT
 <213> H. sapiens

<400> 9

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
 1 5 10 15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
 20 25 30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
 340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
 355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
 515 520 525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
 530 535 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
 545 550 555 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
 565 570 575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
 610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
 625 630 635 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
 645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
 690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
 705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
 725 730 735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
 740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
 755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
 770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
 785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
 805 810 815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
 820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
 835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
 850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
 865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
 885 890 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
 900 905 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
 915 920 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
 930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
 945 950 955 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
 965 970 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
 980 985 990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 995 1000 1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
 1010 1015 1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
 1025 1030 1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
 1040 1045 1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
 1055 1060 1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
 1070 1075 1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
 1085 1090 1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
 1100 1105 1110

Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
 1115 1120 1125

Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
 1130 1135 1140

Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
 1145 1150 1155

Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
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Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn
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Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly
 1190 1195 1200

Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn
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His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
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Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
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Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
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Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
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Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
 1280 1285 1290

Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
 1295 1300 1305

Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
 1310 1315 1320

Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
 1325 1330 1335

Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
 1340 1345 1350

Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile
 1355 1360 1365

Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala
 1370 1375 1380

Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp
 1385 1390 1395

Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile
 1400 1405 1410

Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His Arg
 1415 1420 1425

Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr
 1430 1435 1440

Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile
 1445 1450 1455
 Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg
 1460 1465 1470
 Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
 1475 1480 1485
 Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
 1490 1495 1500
 Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr
 1505 1510 1515
 Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln
 1520 1525 1530
 Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro
 1535 1540 1545
 Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys
 1550 1555 1560
 Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
 1565 1570 1575
 Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
 1580 1585 1590
 Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser
 1595 1600 1605
 Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp
 1610 1615 1620
 Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala
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 Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val
 1640 1645 1650
 Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp Val
 1655 1660 1665

Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln
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Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val
 1685 1690 1695

Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg
 1700 1705 1710

Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
 1715 1720 1725

Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly
 1730 1735 1740

Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp
 1745 1750 1755

Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly
 1760 1765 1770

Ser Gly Leu Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys
 1775 1780 1785

Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp
 1790 1795 1800

Gln Val Ser Glu Lys Met Gly Thr Cys Ser Lys Ala Asp Gly Ser
 1805 1810 1815

Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met
 1820 1825 1830

Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp His Lys Gly Thr Asn
 1835 1840 1845

Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro
 1850 1855 1860

Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser
 1865 1870 1875

Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu
 1880 1885 1890

Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro
 1895 1900 1905

Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu
 1910 1915 1920

Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp
 1925 1930 1935

Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln
 1940 1945 1950

Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
 1955 1960 1965

Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
 1970 1975 1980

Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe
 1985 1990 1995

Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile
 2000 2005 2010

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
 2015 2020 2025

Gln Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg
 2030 2035 2040

Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
 2045 2050 2055

Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
 2060 2065 2070

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
 2075 2080 2085

Val Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val
 2090 2095 2100

Phe Glu Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly
 2105 2110 2115

Ser Ile	Lys Arg Gly Ser	Lys	Asp Asn Ala Thr	Asp	Ser Val Pro
2120		2125		2130	
Leu Arg	Thr Gly Ile Gly	Val	Gln Leu Lys Asp	Ile	Lys Val Phe
2135		2140		2145	
Asn Arg	Asp Arg Gln Lys	Gly	Thr Asn Val Cys	Ala	Val Ala Asn
2150		2155		2160	
Gly Gly	Cys Gln Gln Leu	Cys	Leu Tyr Arg Gly	Arg	Gly Gln Arg
2165		2170		2175	
Ala Cys	Ala Cys Ala His	Gly	Met Leu Ala Glu	Asp	Gly Ala Ser
2180		2185		2190	
Cys Arg	Glu Tyr Ala Gly	Tyr	Leu Leu Tyr Ser	Glu	Arg Thr Ile
2195		2200		2205	
Leu Lys	Ser Ile His Leu	Ser	Asp Glu Arg Asn	Leu	Asn Ala Pro
2210		2215		2220	
Val Gln	Pro Phe Glu Asp	Pro	Glu His Met Lys	Asn	Val Ile Ala
2225		2230		2235	
Leu Ala	Phe Asp Tyr Arg	Ala	Gly Thr Ser Pro	Gly	Thr Pro Asn
2240		2245		2250	
Arg Ile	Phe Phe Ser Asp	Ile	His Phe Gly Asn	Ile	Gln Gln Ile
2255		2260		2265	
Asn Asp	Asp Gly Ser Arg	Arg	Ile Thr Ile Val	Glu	Asn Val Gly
2270		2275		2280	
Ser Val	Glu Gly Leu Ala	Tyr	His Arg Gly Trp	Asp	Thr Leu Tyr
2285		2290		2295	
Trp Thr	Ser Tyr Thr Thr	Ser	Thr Ile Thr Arg	His	Thr Val Asp
2300		2305		2310	
Gln Thr	Arg Pro Gly Ala	Phe	Glu Arg Glu Thr	Val	Ile Thr Met
2315		2320		2325	
Ser Gly	Asp Asp His Pro	Arg	Ala Phe Val Leu	Asp	Glu Cys Gln
2330		2335		2340	

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
 2345 2350 2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
 2360 2365 2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
 2375 2380 2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
 2390 2395 2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
 2405 2410 2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
 2420 2425 2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
 2435 2440 2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
 2450 2455 2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
 2465 2470 2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
 2480 2485 2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
 2495 2500 2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser
 2510 2515 2520

Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile
 2525 2530 2535

Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
 2540 2545 2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
 2555 2560 2565

Thr Phe	Arg Gln Cys Ser	Asn	Gly Arg Cys Val	Ser	Asn Met Leu
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Trp Cys	Asn Gly Ala Asp	Asp	Cys Gly Asp Gly	Ser	Asp Glu Ile
2585		2590		2595	
Pro Cys	Asn Lys Thr Ala	Cys	Gly Val Gly Glu	Phe	Arg Cys Arg
2600		2605		2610	
Asp Gly	Thr Cys Ile Gly	Asn	Ser Ser Arg Cys	Asn	Gln Phe Val
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Cys Ser	Ser Tyr Phe Arg	Leu	Gly Val Lys Gly	Val	Leu Phe Gln
2645		2650		2655	
Pro Cys	Glu Arg Thr Ser	Leu	Cys Tyr Ala Pro	Ser	Trp Val Cys
2660		2665		2670	
Asp Gly	Ala Asn Asp Cys	Gly	Asp Tyr Ser Asp	Glu	Arg Asp Cys
2675		2680		2685	
Pro Gly	Val Lys Arg Pro	Arg	Cys Pro Leu Asn	Tyr	Phe Ala Cys
2690		2695		2700	
Pro Ser	Gly Arg Cys Ile	Pro	Met Ser Trp Thr	Cys	Asp Lys Glu
2705		2710		2715	
Asp Asp	Cys Glu His Gly	Glu	Asp Glu Thr His	Cys	Asn Lys Phe
2720		2725		2730	
Cys Ser	Glu Ala Gln Phe	Glu	Cys Gln Asn His	Arg	Cys Ile Ser
2735		2740		2745	
Lys Gln	Trp Leu Cys Asp	Gly	Ser Asp Asp Cys	Gly	Asp Gly Ser
2750		2755		2760	
Asp Glu	Ala Ala His Cys	Glu	Gly Lys Thr Cys	Gly	Pro Ser Ser
2765		2770		2775	
Phe Ser	Cys Pro Gly Thr	His	Val Cys Val Pro	Glu	Arg Trp Leu
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Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly Ala Asp Glu Ser Ile
 2795 2800 2805

Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe
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Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe Val Cys Asp
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His Asp Arg Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys
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Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg Cys Ala Asn Gly
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Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp
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Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His Cys Thr
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Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys Ser
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Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
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Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
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Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
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Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
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Lys Asp Asp Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr
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Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
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Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
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His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
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 Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
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 Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser
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 Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr
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 Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile
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 Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser
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 Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr
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Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His
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Lys Thr Thr Gly Thr Asn Lys Thr Leu Leu Ile Ser Thr Leu His
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Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp
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Val Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn
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Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro
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Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys Ile
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Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys Ala Asp Gly
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Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp Gln Phe
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Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys Asp
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Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp
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Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe
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Val Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val
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Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Thr Asp Asn Cys Gly
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Thr His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg
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Ser Cys Ala Thr Asn Ala Ser Ile Cys Gly Asp Glu Ala Arg Cys
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Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe
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His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys
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Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly
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Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn
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Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala
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 Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly
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 Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys
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 Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val
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 Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr
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 Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val Phe
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 Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
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 Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
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Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp
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Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
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Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr
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Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
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Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
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Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys
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Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
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Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
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Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
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Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn
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Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln
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 4415

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 <211> 4464
 <212> PRT
 <213> H. sapiens

<400> 10

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Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
 20 25 30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
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Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
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Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
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Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
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Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
 610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
 625 630 635 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
 645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
 690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
 705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
 725 730 735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
 740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
 755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
 770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
 785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
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Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
 820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
 835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
 850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
 865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
 885 890 895
 Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
 900 905 910
 Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
 915 920 925
 Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
 930 935 940
 Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
 945 950 955 960
 Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
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 Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
 980 985 990
 Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 995 1000 1005
 Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
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 Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
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 Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
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 Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
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 Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
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Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
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Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
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Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
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Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
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Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly
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Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn
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His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
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Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
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Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
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Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
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Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
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Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
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Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
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Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
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Ile	Gln	Tyr	Gly	Leu	Ala	Thr	Pro	Glu	Gly	Leu	Ala	Val	Asp	Trp
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1355						1360					1365			
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1385						1390					1395			
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1415						1420					1425			
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Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
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Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
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Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp
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Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala
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Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp Val
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Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln
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Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val
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Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg
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Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
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Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly
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Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp
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Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly
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Ser Gly Leu Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys
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Ala Thr	Ala Leu	Ala Ile	Met	Gly Asp	Lys Leu	Trp	Trp Ala	Asp	
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Gln Val	Ser Glu	Lys Met	Gly	Thr Cys	Ser Lys	Ala	Asp Gly	Ser	
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Thr Ser	Glu Thr	Thr Arg	Ser	Cys Met	Cys Thr	Ala	Gly Tyr	Ser	
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Leu Arg	Ser Gly	Gln Gln	Ala	Cys Glu	Gly Val	Gly	Ser Phe	Leu	
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Leu Tyr	Ser Val	His Glu	Gly	Ile Arg	Gly Ile	Pro	Leu Asp	Pro	
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Asn Asp	Lys Ser	Asp Ala	Leu	Val Pro	Val Ser	Gly	Thr Ser	Leu	
1910			1915			1920			
Ala Val	Gly Ile	Asp Phe	His	Ala Glu	Asn Asp	Thr	Ile Tyr	Trp	
1925			1930			1935			
Val Asp	Met Gly	Leu Ser	Thr	Ile Ser	Arg Ala	Lys	Arg Asp	Gln	
1940			1945			1950			
Thr Trp	Arg Glu	Asp Val	Val	Thr Asn	Gly Ile	Gly	Arg Val	Glu	
1955			1960			1965			
Gly Ile	Ala Val	Asp Trp	Ile	Ala Gly	Asn Ile	Tyr	Trp Thr	Asp	
1970			1975			1980			
Gln Gly	Phe Asp	Val Ile	Glu	Val Ala	Arg Leu	Asn	Gly Ser	Phe	
1985			1990			1995			
Arg Tyr	Val Val	Ile Ser	Gln	Gly Leu	Asp Lys	Pro	Arg Ala	Ile	
2000			2005			2010			

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
 2015 2020 2025

Gln Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg
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Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
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Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
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Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
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Phe Glu Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly
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Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe
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Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala Val Ala Asn
 2150 2155 2160

Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly Gln Arg
 2165 2170 2175

Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala Ser
 2180 2185 2190

Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile
 2195 2200 2205

Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
 2210 2215 2220

Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala
 2225 2230 2235

Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn
 2240 2245 2250
 Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile
 2255 2260 2265
 Asn Asp Asp Gly Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly
 2270 2275 2280
 Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr
 2285 2290 2295
 Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp
 2300 2305 2310
 Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
 2315 2320 2325
 Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
 2330 2335 2340
 Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
 2345 2350 2355
 Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
 2360 2365 2370
 Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
 2375 2380 2385
 Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
 2390 2395 2400
 Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
 2405 2410 2415
 Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
 2420 2425 2430
 Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
 2435 2440 2445
 Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
 2450 2455 2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
 2465 2470 2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
 2480 2485 2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
 2495 2500 2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser
 2510 2515 2520

Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile
 2525 2530 2535

Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
 2540 2545 2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
 2555 2560 2565

Thr Phe Arg Gln Cys Ser Asn Gly Arg Cys Val Ser Asn Met Leu
 2570 2575 2580

Trp Cys Asn Gly Ala Asp Asp Cys Gly Asp Gly Ser Asp Glu Ile
 2585 2590 2595

Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg
 2600 2605 2610

Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val
 2615 2620 2625

Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp
 2630 2635 2640

Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln
 2645 2650 2655

Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys
 2660 2665 2670

Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
 2675 2680 2685

Pro Gly	Val Lys Arg	Pro Arg	Cys Pro Leu Asn Tyr	Phe Ala Cys
2690		2695		2700
Pro Ser	Gly Arg Cys Ile	Pro Met Ser Trp Thr	Cys	Asp Lys Glu
2705		2710		2715
Asp Asp	Cys Glu His Gly	Glu Asp Glu Thr His	Cys	Asn Lys Phe
2720		2725		2730
Cys Ser	Glu Ala Gln Phe	Glu Cys Gln Asn His	Arg	Cys Ile Ser
2735		2740		2745
Lys Gln	Trp Leu Cys Asp	Gly Ser Asp Asp Cys	Gly	Asp Gly Ser
2750		2755		2760
Asp Glu	Ala Ala His Cys	Glu Gly Lys Thr Cys	Gly	Pro Ser Ser
2765		2770		2775
Phe Ser	Cys Pro Gly Thr	His Val Cys Val Pro	Glu	Arg Trp Leu
2780		2785		2790
Cys Asp	Gly Asp Lys Asp	Cys Ala Asp Gly Ala	Asp	Glu Ser Ile
2795		2800		2805
Ala Ala	Gly Cys Leu Tyr	Asn Ser Thr Cys Asp	Asp	Arg Glu Phe
2810		2815		2820
Met Cys	Gln Asn Arg Gln	Cys Ile Pro Lys His	Phe	Val Cys Asp
2825		2830		2835
His Asp	Arg Asp Cys Ala	Asp Gly Ser Asp Glu	Ser	Pro Glu Cys
2840		2845		2850
Glu Tyr	Pro Thr Cys Gly	Pro Ser Glu Phe Arg	Cys	Ala Asn Gly
2855		2860		2865
Arg Cys	Leu Ser Ser Arg	Gln Trp Glu Cys Asp	Gly	Glu Asn Asp
2870		2875		2880
Cys His	Asp Gln Ser Asp	Glu Ala Pro Lys Asn	Pro	His Cys Thr
2885		2890		2895
Ser Pro	Glu His Lys Cys	Asn Ala Ser Ser Gln	Phe	Leu Cys Ser
2900		2905		2910

Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
 2915 2920 2925
 Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
 2930 2935 2940
 Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
 2945 2950 2955
 Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
 2960 2965 2970
 Lys Asp Asp Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr
 2975 2980 2985
 Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
 2990 2995 3000
 Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
 3005 3010 3015
 His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
 3020 3025 3030
 Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
 3035 3040 3045
 Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Asp
 3050 3055 3060
 Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp Val Thr Thr
 3065 3070 3075
 Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val
 3080 3085 3090
 Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala
 3095 3100 3105
 Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg
 3110 3115 3120
 Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val
 3125 3130 3135

Leu Val 3140	Ser Ser Gly	Leu Arg 3145	Glu Pro Arg Ala	Leu Val Val Asp 3150
Val Gln 3155	Asn Gly Tyr	Leu Tyr 3160	Trp Thr Asp Trp Gly	Asp His Ser 3165
Leu Ile 3170	Gly Arg Ile	Gly Met 3175	Asp Gly Ser Ser Arg	Ser Val Ile 3180
Val Asp 3185	Thr Lys Ile	Thr Trp 3190	Pro Asn Gly Leu Thr	Leu Asp Tyr 3195
Val Thr 3200	Glu Arg Ile	Tyr Trp 3205	Ala Asp Ala Arg Glu	Asp Tyr Ile 3210
Glu Phe 3215	Ala Ser Leu	Asp Gly 3220	Ser Asn Arg His Val	Val Leu Ser 3225
Gln Asp 3230	Ile Pro His	Ile Phe 3235	Ala Leu Thr Leu Phe	Glu Asp Tyr 3240
Val Tyr 3245	Trp Thr Asp	Trp Glu 3250	Thr Lys Ser Ile Asn	Arg Ala His 3255
Lys Thr 3260	Thr Gly Thr	Asn Lys 3265	Thr Leu Leu Ile Ser	Thr Leu His 3270
Arg Pro 3275	Met Asp Leu	His Val 3280	Phe His Ala Leu Arg	Gln Pro Asp 3285
Val Pro 3290	Asn His Pro	Cys Lys 3295	Val Asn Asn Gly Gly	Cys Ser Asn 3300
Leu Cys 3305	Leu Leu Ser	Pro Gly 3310	Gly Gly His Lys Cys	Ala Cys Pro 3315
Thr Asn 3320	Phe Tyr Leu	Gly Ser 3325	Asp Gly Arg Thr Cys	Val Ser Asn 3330
Cys Thr 3335	Ala Ser Gln	Phe Val 3340	Cys Lys Asn Asp Lys	Cys Ile Pro 3345
Phe Trp 3350	Trp Lys Cys	Asp Thr 3355	Glu Asp Asp Cys Gly	Asp His Ser 3360

Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln
 3365 3370 3375

Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys
 3380 3385 3390

Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys
 3395 3400 3405

Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
 3410 3415 3420

Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn
 3425 3430 3435

Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys
 3440 3445 3450

Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro
 3455 3460 3465

Arg Val Trp Val Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser
 3470 3475 3480

Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu
 3485 3490 3495

Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys
 3500 3505 3510

Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys
 3515 3520 3525

Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys
 3530 3535 3540

Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp
 3545 3550 3555

Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg
 3560 3565 3570

Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys Ile
 3575 3580 3585

Ala Gly	Arg Trp Lys Cys	Asp Gly Asp His Asp Cys	Ala Asp Gly
3590		3595	3600
Ser Asp	Glu Lys Asp Cys Thr	Pro Arg Cys Asp Met	Asp Gln Phe
3605		3610	3615
Gln Cys	Lys Ser Gly His Cys	Ile Pro Leu Arg Trp	Arg Cys Asp
3620		3625	3630
Ala Asp	Ala Asp Cys Met Asp	Gly Ser Asp Glu Glu	Ala Cys Gly
3635		3640	3645
Thr Gly	Val Arg Thr Cys Pro	Leu Asp Glu Phe Gln	Cys Asn Asn
3650		3655	3660
Thr Leu	Cys Lys Pro Leu Ala	Trp Lys Cys Asp Gly	Glu Asp Asp
3665		3670	3675
Cys Gly	Asp Asn Ser Asp Glu	Asn Pro Glu Glu Cys	Ala Arg Phe
3680		3685	3690
Val Cys	Pro Pro Asn Arg Pro	Phe Arg Cys Lys Asn	Asp Arg Val
3695		3700	3705
Cys Leu	Trp Ile Gly Arg Gln	Cys Asp Gly Thr Asp	Asn Cys Gly
3710		3715	3720
Asp Gly	Thr Asp Glu Glu Asp	Cys Glu Pro Pro Thr	Ala His Thr
3725		3730	3735
Thr His	Cys Lys Asp Lys Lys	Glu Phe Leu Cys Arg	Asn Gln Arg
3740		3745	3750
Cys Leu	Ser Ser Ser Leu Arg	Cys Asn Met Phe Asp	Asp Cys Gly
3755		3760	3765
Asp Gly	Ser Asp Glu Glu Asp	Cys Ser Ile Asp Pro	Lys Leu Thr
3770		3775	3780
Ser Cys	Ala Thr Asn Ala Ser	Ile Cys Gly Asp Glu	Ala Arg Cys
3785		3790	3795
Val Arg	Thr Glu Lys Ala Ala	Tyr Cys Ala Cys Arg	Ser Gly Phe
3800		3805	3810

His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys
 3815 3820 3825

Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly
 3830 3835 3840

Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn
 3845 3850 3855

Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala
 3860 3865 3870

Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
 3875 3880 3885

Ala Tyr Glu Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
 3890 3895 3900

Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn
 3905 3910 3915

Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala
 3920 3925 3930

Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly
 3935 3940 3945

Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile
 3950 3955 3960

Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly
 3965 3970 3975

Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys
 3980 3985 3990

Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val
 3995 4000 4005

Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His
 4010 4015 4020

Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr
 4025 4030 4035

Leu Val	Gln Asp Asn Ile	Gln	Trp Pro Thr Gly	Leu	Ala Val Asp
4040		4045		4050	
Tyr His	Asn Glu Arg Leu	Tyr	Trp Ala Asp Ala	Lys	Leu Ser Val
4055		4060		4065	
Ile Gly	Ser Ile Arg Leu	Asn	Gly Thr Asp Pro	Ile	Val Ala Ala
4070		4075		4080	
Asp Ser	Lys Arg Gly Leu	Ser	His Pro Phe Ser	Ile	Asp Val Phe
4085		4090		4095	
Glu Asp	Tyr Ile Tyr Gly	Val	Thr Tyr Ile Asn	Asn	Arg Val Phe
4100		4105		4110	
Lys Ile	His Lys Phe Gly	His	Ser Pro Leu Val	Asn	Leu Thr Gly
4115		4120		4125	
Gly Leu	Ser His Ala Ser	Asp	Val Val Leu Tyr	His	Gln His Lys
4130		4135		4140	
Gln Pro	Glu Val Thr Asn	Pro	Cys Asp Arg Lys	Lys	Cys Glu Trp
4145		4150		4155	
Leu Cys	Leu Leu Ser Pro	Ser	Gly Pro Val Cys	Thr	Cys Pro Asn
4160		4165		4170	
Gly Lys	Arg Leu Asp Asn	Gly	Thr Cys Val Pro	Val	Pro Ser Pro
4175		4180		4185	
Thr Pro	Pro Pro Asp Ala	Pro	Arg Pro Gly Thr	Cys	Asn Leu Gln
4190		4195		4200	
Cys Phe	Asn Gly Gly Ser	Cys	Phe Leu Asn Ala	Arg	Arg Gln Pro
4205		4210		4215	
Lys Cys	Arg Cys Gln Pro	Arg	Tyr Thr Gly Asp	Lys	Cys Glu Leu
4220		4225		4230	
Asp Gln	Cys Trp Glu His	Cys	Arg Asn Gly Gly	Thr	Cys Ala Ala
4235		4240		4245	
Ser Pro	Ser Gly Met Pro	Thr	Cys Arg Cys Pro	Thr	Gly Phe Thr
4250		4255		4260	

Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
 4265 4270 4275
 Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
 4280 4285 4290
 Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys
 4295 4300 4305
 Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
 4310 4315 4320
 Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg
 4325 4330 4335
 Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
 4340 4345 4350
 Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
 4355 4360 4365
 Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn
 4370 4375 4380
 Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln
 4385 4390 4395
 Cys Pro Pro His Met Thr Gly Pro Arg Cys Glu Glu His Val Phe
 4400 4405 4410
 Ser Gln Gln Gln Pro Gly Gly Gly Arg Leu Val Pro Arg Gly Ser
 4415 4420 4425
 Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Ile Glu Gly His Val Gly
 4430 4435 4440
 Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu Gly
 4445 4450 4455
 His His His His His His
 4460

<210> 11
 <211> 4419
 <212> PRT
 <213> H. sapiens

<400> 11

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
 1 5 10 15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
 20 25 30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
 340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
 355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
 515 520 525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
 530 535 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
 545 550 555 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
 565 570 575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
 610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
 625 630 635 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
 645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
 690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
 705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
 725 730 735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
 740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
 755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
 770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
 785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
 805 810 815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
 820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
 835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
 850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
 865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
 885 890 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
 900 905 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
 915 920 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
 930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
 945 950 955 960

Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn
1175 1180 1185

Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly
 1190 1195 1200

Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn
 1205 1210 1215

His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
 1220 1225 1230

Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
 1235 1240 1245

Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
 1250 1255 1260

Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
 1265 1270 1275

Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
 1280 1285 1290

Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
 1295 1300 1305

Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
 1310 1315 1320

Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
 1325 1330 1335

Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
 1340 1345 1350

Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile
 1355 1360 1365

Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala
 1370 1375 1380

Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp
 1385 1390 1395

Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile
 1400 1405 1410

Glu Ala Ala Ser Met Ser Gly	Ala Gly Arg Arg Thr	Val His Arg
1415	1420	1425
Glu Thr Gly Ser Gly Gly Trp	Pro Asn Gly Leu Thr	Val Asp Tyr
1430	1435	1440
Leu Glu Lys Arg Ile Leu Trp	Ile Asp Ala Arg Ser	Asp Ala Ile
1445	1450	1455
Tyr Ser Ala Arg Tyr Asp Gly	Ser Gly His Met Glu	Val Leu Arg
1460	1465	1470
Gly His Glu Phe Leu Ser His	Pro Phe Ala Val Thr	Leu Tyr Gly
1475	1480	1485
Gly Glu Val Tyr Trp Thr Asp	Trp Arg Thr Asn Thr	Leu Ala Lys
1490	1495	1500
Ala Asn Lys Trp Thr Gly His	Asn Val Thr Val Val	Gln Arg Thr
1505	1510	1515
Asn Thr Gln Pro Phe Asp Leu	Gln Val Tyr His Pro	Ser Arg Gln
1520	1525	1530
Pro Met Ala Pro Asn Pro Cys	Glu Ala Asn Gly Gly	Gln Gly Pro
1535	1540	1545
Cys Ser His Leu Cys Leu Ile	Asn Tyr Asn Arg Thr	Val Ser Cys
1550	1555	1560
Ala Cys Pro His Leu Met Lys	Leu His Lys Asp Asn	Thr Thr Cys
1565	1570	1575
Tyr Glu Phe Lys Lys Phe Leu	Leu Tyr Ala Arg Gln	Met Glu Ile
1580	1585	1590
Arg Gly Val Asp Leu Asp Ala	Pro Tyr Tyr Asn Tyr	Ile Ile Ser
1595	1600	1605
Phe Thr Val Pro Asp Ile Asp	Asn Val Thr Val Leu	Asp Tyr Asp
1610	1615	1620
Ala Arg Glu Gln Arg Val Tyr	Trp Ser Asp Val Arg	Thr Gln Ala
1625	1630	1635

Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val
 1640 1645 1650

Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp Val
 1655 1660 1665

Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln
 1670 1675 1680

Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val
 1685 1690 1695

Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg
 1700 1705 1710

Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
 1715 1720 1725

Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly
 1730 1735 1740

Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp
 1745 1750 1755

Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly
 1760 1765 1770

Ser Gly Leu Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys
 1775 1780 1785

Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp
 1790 1795 1800

Gln Val Ser Glu Lys Met Gly Thr Cys Ser Lys Ala Asp Gly Ser
 1805 1810 1815

Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met
 1820 1825 1830

Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp His Lys Gly Thr Asn
 1835 1840 1845

Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro
 1850 1855 1860

Thr	Ser	Glu	Thr	Thr	Arg	Ser	Cys	Met	Cys	Thr	Ala	Gly	Tyr	Ser
1865						1870					1875			
Leu	Arg	Ser	Gly	Gln	Gln	Ala	Cys	Glu	Gly	Val	Gly	Ser	Phe	Leu
1880						1885					1890			
Leu	Tyr	Ser	Val	His	Glu	Gly	Ile	Arg	Gly	Ile	Pro	Leu	Asp	Pro
1895						1900					1905			
Asn	Asp	Lys	Ser	Asp	Ala	Leu	Val	Pro	Val	Ser	Gly	Thr	Ser	Leu
1910						1915					1920			
Ala	Val	Gly	Ile	Asp	Phe	His	Ala	Glu	Asn	Asp	Thr	Ile	Tyr	Trp
1925						1930					1935			
Val	Asp	Met	Gly	Leu	Ser	Thr	Ile	Ser	Arg	Ala	Lys	Arg	Asp	Gln
1940						1945					1950			
Thr	Trp	Arg	Glu	Asp	Val	Val	Thr	Asn	Gly	Ile	Gly	Arg	Val	Glu
1955						1960					1965			
Gly	Ile	Ala	Val	Asp	Trp	Ile	Ala	Gly	Asn	Ile	Tyr	Trp	Thr	Asp
1970						1975					1980			
Gln	Gly	Phe	Asp	Val	Ile	Glu	Val	Ala	Arg	Leu	Asn	Gly	Ser	Phe
1985						1990					1995			
Arg	Tyr	Val	Val	Ile	Ser	Gln	Gly	Leu	Asp	Lys	Pro	Arg	Ala	Ile
2000						2005					2010			
Thr	Val	His	Pro	Glu	Lys	Gly	Tyr	Leu	Phe	Trp	Thr	Glu	Trp	Gly
2015						2020					2025			
Gln	Tyr	Pro	Arg	Ile	Glu	Arg	Ser	Arg	Leu	Asp	Gly	Thr	Glu	Arg
2030						2035					2040			
Val	Val	Leu	Val	Asn	Val	Ser	Ile	Ser	Trp	Pro	Asn	Gly	Ile	Ser
2045						2050					2055			
Val	Asp	Tyr	Gln	Asp	Gly	Lys	Leu	Tyr	Trp	Cys	Asp	Ala	Arg	Thr
2060						2065					2070			
Asp	Lys	Ile	Glu	Arg	Ile	Asp	Leu	Glu	Thr	Gly	Glu	Asn	Arg	Glu
2075						2080					2085			

Val Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val
 2090 2095 2100

Phe Glu Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly
 2105 2110 2115

Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala Thr Asp Ser Val Pro
 2120 2125 2130

Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe
 2135 2140 2145

Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala Val Ala Asn
 2150 2155 2160

Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly Gln Arg
 2165 2170 2175

Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala Ser
 2180 2185 2190

Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile
 2195 2200 2205

Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
 2210 2215 2220

Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala
 2225 2230 2235

Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn
 2240 2245 2250

Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile
 2255 2260 2265

Asn Asp Asp Gly Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly
 2270 2275 2280

Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr
 2285 2290 2295

Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp
 2300 2305 2310

Gln Thr	Arg Pro Gly Ala Phe	Glu Arg Glu Thr Val	Ile Thr Met
2315	2320	2325	
Ser Gly	Asp Asp His Pro Arg	Ala Phe Val Leu Asp	Glu Cys Gln
2330	2335	2340	
Asn Leu	Met Phe Trp Thr Asn	Trp Asn Glu Gln His	Pro Ser Ile
2345	2350	2355	
Met Arg	Ala Ala Leu Ser Gly	Ala Asn Val Leu Thr	Leu Ile Glu
2360	2365	2370	
Lys Asp	Ile Arg Thr Pro Asn	Gly Leu Ala Ile Asp	His Arg Ala
2375	2380	2385	
Glu Lys	Leu Tyr Phe Ser Asp	Ala Thr Leu Asp Lys	Ile Glu Arg
2390	2395	2400	
Cys Glu	Tyr Asp Gly Ser His	Arg Tyr Val Ile Leu	Lys Ser Glu
2405	2410	2415	
Pro Val	His Pro Phe Gly Leu	Ala Val Tyr Gly Glu	His Ile Phe
2420	2425	2430	
Trp Thr	Asp Trp Val Arg Arg	Ala Val Gln Arg Ala	Asn Lys His
2435	2440	2445	
Val Gly	Ser Asn Met Lys Leu	Leu Arg Val Asp Ile	Pro Gln Gln
2450	2455	2460	
Pro Met	Gly Ile Ile Ala Val	Ala Asn Asp Thr Asn	Ser Cys Glu
2465	2470	2475	
Leu Ser	Pro Cys Arg Ile Asn	Asn Gly Gly Cys Gln	Asp Leu Cys
2480	2485	2490	
Leu Leu	Thr His Gln Gly His	Val Asn Cys Ser Cys	Arg Gly Gly
2495	2500	2505	
Arg Ile	Leu Gln Asp Asp Leu	Thr Cys Arg Ala Val	Asn Ser Ser
2510	2515	2520	
Cys Arg	Ala Gln Asp Glu Phe	Glu Cys Ala Asn Gly	Glu Cys Ile
2525	2530	2535	

Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
 2540 2545 2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
 2555 2560 2565

Thr Phe Arg Gln Cys Ser Asn Gly Arg Cys Val Ser Asn Met Leu
 2570 2575 2580

Trp Cys Asn Gly Ala Asp Asp Cys Gly Asp Gly Ser Asp Glu Ile
 2585 2590 2595

Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg
 2600 2605 2610

Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val
 2615 2620 2625

Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp
 2630 2635 2640

Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln
 2645 2650 2655

Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys
 2660 2665 2670

Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
 2675 2680 2685

Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
 2690 2695 2700

Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu
 2705 2710 2715

Asp Asp Cys Glu His Gly Glu Asp Glu Thr His Cys Asn Lys Phe
 2720 2725 2730

Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser
 2735 2740 2745

Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser
 2750 2755 2760

Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser
 2765 2770 2775

Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu
 2780 2785 2790

Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly Ala Asp Glu Ser Ile
 2795 2800 2805

Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe
 2810 2815 2820

Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe Val Cys Asp
 2825 2830 2835

His Asp Arg Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys
 2840 2845 2850

Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg Cys Ala Asn Gly
 2855 2860 2865

Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp
 2870 2875 2880

Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His Cys Thr
 2885 2890 2895

Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys Ser
 2900 2905 2910

Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
 2915 2920 2925

Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
 2930 2935 2940

Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
 2945 2950 2955

Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
 2960 2965 2970

Lys Asp Asp Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr
 2975 2980 2985

Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
 2990 2995 3000
 Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
 3005 3010 3015
 His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
 3020 3025 3030
 Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
 3035 3040 3045
 Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Asp
 3050 3055 3060
 Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp Val Thr Thr
 3065 3070 3075
 Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val
 3080 3085 3090
 Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala
 3095 3100 3105
 Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg
 3110 3115 3120
 Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val
 3125 3130 3135
 Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val Asp
 3140 3145 3150
 Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser
 3155 3160 3165
 Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Ser Arg Ser Val Ile
 3170 3175 3180
 Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr
 3185 3190 3195
 Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile
 3200 3205 3210

Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser	3215	3220	3225
Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr	3230	3235	3240
Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His	3245	3250	3255
Lys Thr Thr Gly Thr Asn Lys Thr Leu Leu Ile Ser Thr Leu His	3260	3265	3270
Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp	3275	3280	3285
Val Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn	3290	3295	3300
Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro	3305	3310	3315
Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val Ser Asn	3320	3325	3330
Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro	3335	3340	3345
Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser	3350	3355	3360
Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln	3365	3370	3375
Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys	3380	3385	3390
Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys	3395	3400	3405
Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr	3410	3415	3420
Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn	3425	3430	3435

Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys
 3440 3445 3450
 Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro
 3455 3460 3465
 Arg Val Trp Val Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser
 3470 3475 3480
 Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu
 3485 3490 3495
 Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys
 3500 3505 3510
 Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys
 3515 3520 3525
 Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys
 3530 3535 3540
 Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp
 3545 3550 3555
 Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg
 3560 3565 3570
 Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys Ile
 3575 3580 3585
 Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys Ala Asp Gly
 3590 3595 3600
 Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp Gln Phe
 3605 3610 3615
 Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys Asp
 3620 3625 3630
 Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly
 3635 3640 3645
 Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn
 3650 3655 3660

Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp
 3665 3670 3675

Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe
 3680 3685 3690

Val Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val
 3695 3700 3705

Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Thr Asp Asn Cys Gly
 3710 3715 3720

Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala His Thr
 3725 3730 3735

Thr His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg
 3740 3745 3750

Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly
 3755 3760 3765

Asp Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr
 3770 3775 3780

Ser Cys Ala Thr Asn Ala Ser Ile Cys Gly Asp Glu Ala Arg Cys
 3785 3790 3795

Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe
 3800 3805 3810

His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys
 3815 3820 3825

Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly
 3830 3835 3840

Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn
 3845 3850 3855

Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala
 3860 3865 3870

Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
 3875 3880 3885

Ala Tyr	Glu Gln	Ala Phe	Gln Gly	Asp Glu	Ser Val	Arg Ile	Asp
3890			3895			3900	
Ala Met	Asp Val	His Val	Lys Ala	Gly Arg	Val Tyr	Trp Thr	Asn
3905			3910			3915	
Trp His	Thr Gly	Thr Ile	Ser Tyr	Arg Ser	Leu Pro	Pro Ala	Ala
3920			3925			3930	
Pro Pro	Thr Thr	Ser Asn	Arg His	Arg Arg	Gln Ile	Asp Arg	Gly
3935			3940			3945	
Val Thr	His Leu	Asn Ile	Ser Gly	Leu Lys	Met Pro	Arg Gly	Ile
3950			3955			3960	
Ala Ile	Asp Trp	Val Ala	Gly Asn	Val Tyr	Trp Thr	Asp Ser	Gly
3965			3970			3975	
Arg Asp	Val Ile	Glu Val	Ala Gln	Met Lys	Gly Glu	Asn Arg	Lys
3980			3985			3990	
Thr Leu	Ile Ser	Gly Met	Ile Asp	Glu Pro	His Ala	Ile Val	Val
3995			4000			4005	
Asp Pro	Leu Arg	Gly Thr	Met Tyr	Trp Ser	Asp Trp	Gly Asn	His
4010			4015			4020	
Pro Lys	Ile Glu	Thr Ala	Ala Met	Asp Gly	Thr Leu	Arg Glu	Thr
4025			4030			4035	
Leu Val	Gln Asp	Asn Ile	Gln Trp	Pro Thr	Gly Leu	Ala Val	Asp
4040			4045			4050	
Tyr His	Asn Glu	Arg Leu	Tyr Trp	Ala Asp	Ala Lys	Leu Ser	Val
4055			4060			4065	
Ile Gly	Ser Ile	Arg Leu	Asn Gly	Thr Asp	Pro Ile	Val Ala	Ala
4070			4075			4080	
Asp Ser	Lys Arg	Gly Leu	Ser His	Pro Phe	Ser Ile	Asp Val	Phe
4085			4090			4095	
Glu Asp	Tyr Ile	Tyr Gly	Val Thr	Tyr Ile	Asn Asn	Arg Val	Phe
4100			4105			4110	

Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
 4115 4120 4125
 Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
 4130 4135 4140
 Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp
 4145 4150 4155
 Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn
 4160 4165 4170
 Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
 4175 4180 4185
 Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln
 4190 4195 4200
 Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro
 4205 4210 4215
 Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu
 4220 4225 4230
 Asp Gln Cys Trp Glu His Cys Arg Asn Gly Gly Thr Cys Ala Ala
 4235 4240 4245
 Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr
 4250 4255 4260
 Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
 4265 4270 4275
 Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
 4280 4285 4290
 Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys
 4295 4300 4305
 Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
 4310 4315 4320
 Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg
 4325 4330 4335

Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
 4340 4345 4350

Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
 4355 4360 4365

Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn
 4370 4375 4380

Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln
 4385 4390 4395

Cys Pro Pro His Met Thr Gly Pro Arg Cys Glu Glu His Val Phe
 4400 4405 4410

Ser Gln Gln Gln Pro Gly
 4415

<210> 12
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 <212> PRT
 <213> H. sapiens

<400> 12

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
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Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
 20 25 30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
 340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe.
 355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
 515 520 525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
 530 535 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
 545 550 555 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
 565 570 575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625 630 635 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
725 730 735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
805 810 815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
885 890 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
900 905 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
915 920 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945 950 955 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
965 970 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn
980 985

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<211> 896
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<400> 13

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
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Ala Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
20 25 30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
 340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
 355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
 515 520 525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
 530 535 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545 550 555 560

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